

**WEST**☐ Generate Collection

L12: Entry 88 of 125

File: DWPI

Sep 22, 1998

DERWENT-ACC-NO: 1998-495436

DERWENT-WEEK: 199908

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TITLE: Food improving composition having deferred activity - containing reactive agents, e.g. baking powder components, gelling agents, enzymes and/or aromas, encapsulated by degradable fats

INVENTOR: KRINGELUM, E W

PATENT-ASSIGNEE:

ASSIGNEE

DANISCO AS

CODE

DANIN

PRIORITY-DATA: 1997US-0039994 (March 6, 1997), 1997DK-0000232 (March 3, 1997)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
AU 9862904 A	September 22, 1998	N/A	000	A21D002/02
WO 9838869 A1	September 11, 1998	E	023	A21D002/02

DESIGNATED-STATES: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
AU 9862904A	February 26, 1998	1998AU-0062904	N/A
AU 9862904A		WO 9838869	Based on
WO 9838869A1	February 26, 1998	1998WO-DK00075	N/A

INT-CL (IPC): A21D 2/02; A23L 1/22; A23P 1/04

ABSTRACTED-PUB-NO: WO 9838869A

BASIC-ABSTRACT:

An edible composition contains at least two components which can interact in an aqueous food system upon contact. Both components are in the form of particles encapsulated by fats which are degradable during processing so that contact can be made, and so that contact is deferred until a selected time during processing and/or storage of the finished product. Interaction does not result in a Maillard reaction; and if the product is a cake mix, the components do not generate a gas upon contact. Also claimed is a method of preparing a food product by adding the above composition under conditions such that the components are contacted and interact.

USE - The food improving composition is useful in aqueous food pre-mixes, the reactive components being e.g. baking powder components, gelling agents, enzymes or aroma components. Typically the composition may be added to a bakery pre-mix or a meat, dairy, fruit or vegetable product mixture.

ADVANTAGE - The pre-mix contains reactive components which are not normally stable in aqueous media. In the present encapsulated form their activity is retained for up to several months and their interaction is prevented before processing of the food system

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: FOOD IMPROVE COMPOSITION DEFER ACTIVE CONTAIN REACT AGENT BAKE POWDER  
COMPONENT GEL AGENT ENZYME AROMA ENCAPSULATE DEGRADE FAT

DERWENT-CLASS: D13

CPI-CODES: D03-H01D; D03-H01J; D03-H01S;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1998-149178

**WEST**[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)**Search Results -**

Term	Documents
(7 WITH 2 WITH 4).USPT,JPAB,EPAB,DWPI,TDBD.	125

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- EPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

5034240.pn.

**Refine Search:****Clear****Search History****Today's Date: 6/23/2001**

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT,JPAB,EPAB,DWPI,TDBD	12 with 17 with 14	125	<u>L12</u>
USPT,JPAB,EPAB,DWPI,TDBD	19 with 14	242	<u>L11</u>
USPT,JPAB,EPAB,DWPI,TDBD	19 same 14	415	<u>L10</u>
USPT,JPAB,EPAB,DWPI,TDBD	11 with 12	4407	<u>L9</u>
USPT,JPAB,EPAB,DWPI,TDBD	12 same 14 same 17	406	<u>L8</u>
USPT,JPAB,EPAB,DWPI,TDBD	fat	118423	<u>L7</u>
USPT,JPAB,EPAB,DWPI,TDBD	14 same 13	886	<u>L6</u>
USPT,JPAB,EPAB,DWPI,TDBD	14 and 13	3651	<u>L5</u>
USPT,JPAB,EPAB,DWPI,TDBD	(powder or granul\$)	957965	<u>L4</u>
USPT,JPAB,EPAB,DWPI,TDBD	11 same 12	8220	<u>L3</u>
USPT,JPAB,EPAB,DWPI,TDBD	enzyme	174460	<u>L2</u>
USPT,JPAB,EPAB,DWPI,TDBD	(fat or oil)	1050812	<u>L1</u>

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L12: Entry 104 of 125

File: DWPI

Oct 6, 1989

DERWENT-ACC-NO: 1989-342098

DERWENT-WEEK: 198947

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TITLE: Prodn. of foodstuff based on soya protein powder or milk - involves use of enzyme for coagulating soya proteins

INVENTOR: EMURA, T; OHBA, K

PATENT-ASSIGNEE:

ASSIGNEE

HOKKAIDO NISSIN KK

CODE

HOKKN

~ No

PRIORITY-DATA: 1988FR-0009956 (July 22, 1988), 1988FR-0004201 (March 30, 1988),  
1988US-0167508 (March 14, 1988), 1989US-0330005 (March 29, 1989), 1989US-0363033  
(June 8, 1989)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
FR 2629310 A	October 6, 1989	N/A	022	N/A
US 4885178 A	December 5, 1989	N/A	009	N/A
US 4929453 A	May 29, 1990	N/A	000	N/A
US 5006350 A	April 9, 1991	N/A	000	N/A

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
FR 2629310A	July 22, 1988	1988FR-0009956	N/A
US 4885178A	March 14, 1988	1988US-0167508	N/A
US 4929453A	March 29, 1989	1989US-0330005	N/A
US 5006350A	June 8, 1989	1989US-0363033	N/A

INT-CL (IPC): A23C 11/06; A23C 20/00; A23J 1/14; A23J 3/00; A23L 1/20; C12N 9/54

RELATED-ACC-NO: 1989-342097

ABSTRACTED-PUB-NO: FR 2629310A

BASIC-ABSTRACT:

Prodn. of a food prod. based on soya proteins comprises: (a) using a soya milk or a soya protein powder, (b) incorporating into the milk or powder, lactone, a fat and an emulsifier, to obtain a base mixture, (c) adding a bacterial culture of lactic acid to the base mixture and (d) incorporating an enzyme for coagulating soya proteins, in powder form.

USE/ADVANTAGE - The process uses a bacteria belonging to the Bacillus species (called bacteria 26D7) which releases an enzyme which coagulates soya proteins to produce a novel food prod. based on soya proteins, e.g. a cheese or a cream.

ABSTRACTED-PUB-NO:

US 4885178A

## EQUIVALENT-ABSTRACTS:

Soybean protein food prod. is produced by firstly preparing a soybean protein soln. (I) by liquefying a soybean protein powder so that the soybean concn. is 7.5%. Soln. (I) is mixed with 2% lactose, 25% solid fat and 2% emulsifier, based upon the fat, thereby providing a base material (II). (II) is then sterilized by heating it at 80 deg.C for 30 mins. (II) is then homogenized at a pressure of 150 kg/cm<sup>2</sup> at 70 deg.C. (II) is placed in a thermostatic container, and maintained in it at 40 deg.C under a pH of 6.5-6.6 and approx. 0.2 acidity, 2-3% lactic acid bacteria are added under pH 4.5-4.7 and approx. 0.75 acidity. (II) is then left for about 30 mins. A soybean protein clotting enzyme soln. (III) is prepd. by adding 0.04-0.06% powdered soybean protein clotting enzyme into 0.2M NaCl soln. When the pH and acidity is about 6.4 and about 0.2-0.25, respectively, soln. (III) is added into (II). Then, when (II) is clotted into a curd, which is cut into many pieces, these are left to stand for about 30 mins., allowing sepn. of a whey from it. The many pieces of curd are then mounted on to a mould device comprising a flat upper die, and a lower die of a top ended cubic shape having plural holes perforated in its lateral walls and bottom wall. Finally, the upper die is lowered downwardly into the lower die, to thereby press the curd at a pressure of 4-5 kg/cm<sup>2</sup> for about 10 hrs., at ambient temp. of 12-15 deg.C.

USE/ADVANTAGE - An enzyme is used capable of clotting the soybean proteins in a manner analogous to rennin enzyme. (9pp)t

US 4929453A

Pure soybean prod. clotting enzyme is produced by Bacillus microorganism FERM BP-1778.

Enzyme has (a) mol. wt. 3000; (b) first peak soybean protein clotting activity at 80 deg.C and a second peak at 65 deg.C; (c) stability for 30 mins. at 35-40 deg.C; (d) stability for 17 hrs. at 4 deg.C at pH 4-9 with 70% activity remaining; (e) increased activity at less than pH 6.0, but none at more than pH 7.0; and is (f) completely inhibited by phenyl methyl sulphonyl fluoride and tosyl fluoride (first peak in (b)), and by EDTA (second peak in (b)); and (g) uninfluence d by metal ions.

USE - To produce soy milk cheese and soy milk cream. (9pp)t

US 5006350A

Cheese-like soybean protein food prod. comprises clotted soybean protein, clotted by enzyme released from microorganism 'FERM BP-1778' (RTM).

Microorganism is cultured in a medium contg. 0.1% yeast extract, 0.02% casamino acid, 0.1% (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 0.05% sodium citrate, 0.01% MgSO<sub>4</sub>, 1.0% phosphate, 5.0% soymilk, and adjusted to pH 6.0 by adding KOH.

USE - Can produce soy milk cheese or -cream and other varieties of soybean protein food prods. (9pp)

CHOSEN-DRAWING: Dwg.0/8

TITLE-TERMS: PRODUCE FOOD BASED SOY PROTEIN POWDER MILK ENZYME COAGULATE SOY PROTEIN

DERWENT-CLASS: D13

CPI-CODES: D03-B; D03-F02; D05-H08;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1989-151568

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L12: Entry 14 of 125

File: USPT

Feb 21, 1995

DOCUMENT-IDENTIFIER: US 5391371 A

TITLE: Use of an enzyme containing granulate in a method for production of a pelletized fodder

## ABPR:

An enzyme containing T-granulate, coated with a coating agent comprising a high melting fat or wax, is combined with a mixture containing fodder components, and the combination is steam treated and subsequently pelletized. The method considerably improves the stability of the enzyme in the pelletized mixture.

## BSPR:

Thus, the use according to the invention of an enzyme containing T-granulate which is coated with a coating agent comprising a high melting fat or wax, is a use as a component of a mixture, which is well suited as a fodder if the mixture is steam treated and subsequently pelletized.

## BSPR:

It appears from the applicant's EP 304,332 that the stability of the enzymes and the physical strength of the granules is improved, if a core is provided with a coating of cellulose fibres, a binder, an enzyme, a filler and a waxy material. It appears from DK 161717 that .beta.-glucanases or .alpha.-amylases can be stabilized by adhesion to a solid carrier; such preparations can be used as ingredients in granulated fodders. It also appears from DE 3,520,007 and GB 2,167,758 that enzyme containing granulates can be coated with fats or waxes. On the basis of this prior art it apparently can be concluded that it is obvious that enzyme containing granulates coated with fat or wax in general are well suited as a component of a fodder mixture to be pelletized. This conclusion, however, is false, as it has been found that some enzyme containing granulates coated with fat or wax (e.g. fat coated Bio-Feed Plus, later to be characterized) are not well suited as a component of a fodder mixture to be pelletized.

## BSPR:

Thus it is surprising that the use according to the invention gives rise to a stable fodder, because it already belongs to the prior art that Bio-Feed Plus (fraction of wheat coated with enzymes), fat coated Bio-Feed Plus, T-granulate not fat coated, and Cellulase P (prill enzyme preparation with high fat content) as a component of a mixture which is converted into a fodder does not give rise to a fodder with stable enzyme activity. These prior art phenomena will be documented later in this specification.

## BSPR:

Also the invention comprises a method for production of a pelletized fodder, and this method is characterized by the fact that a mixture of an enzyme containing T-granulate, which is coated with a coating agent comprising a high melting fat or wax, and fodder components, is steam treated and subsequently pelletized.

## CLPV:

(a) mixing one or more fodder components with an enzyme containing T-granulate, which granulate is coated with a coating agent comprising a high melting fat or a high melting wax;

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L12: Entry 95 of 125

File: DWPI

Dec 9, 1999

DERWENT-ACC-NO: 1994-311623

DERWENT-WEEK: 200004

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TITLE: Granulated ruminant feed additive for post abomasum release - comprises core contg. active substance and coating comprising e. g. hardened fats and oils and hydrolysing enzyme

INVENTOR: IKEDA, T; KANNO, N ; KITAMURA, N ; SHIBAHARA, S ; SUZUKI, H

PATENT-ASSIGNEE:

ASSIGNEE

CODE

SHIBAHARA S

SHIBI

AJINOMOTO CO INC

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AJINOMOTO KK

AJIN

PRIORITY-DATA: 1994JP-0053741 (March 24, 1994), 1993JP-0081979 (April 8, 1993)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DE 69421431 E	December 9, 1999	N/A	000	A23K001/16
EP 619079 A2	October 12, 1994	E	012	A23K001/16
CA 2120891 A	October 9, 1994	N/A	000	A23K001/18
JP 06339343 A	December 13, 1994	N/A	009	A23K001/16
EP 619079 A3	February 22, 1995	N/A	000	A23K001/16
CN 1099934 A	March 15, 1995	N/A	000	A23K001/16
US 5753223 A	May 19, 1998	N/A	000	A61K038/54
EP 619079 B1	November 3, 1999	E	000	A23K001/16

DESIGNATED-STATES: DE DK FR GB NL SE DE DK FR GB NL SE

CITED-DOCUMENTS: No-SR.Pub; 1.Jnl.Ref ; EP 404085 ; GB 2153199 ; JP 04071451 ; JP 60168351 ; US 3493652 ; US 3857968 ; US 5093128

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
DE 69421431E	April 8, 1994	1994DE-0621431	N/A
DE 69421431E	April 8, 1994	1994EP-0105487	N/A
DE 69421431E		EP 619079	Based on
EP 619079A2	April 8, 1994	1994EP-0105487	N/A
CA 2120891A	April 8, 1994	1994CA-2120891	N/A
JP 06339343A	March 24, 1994	1994JP-0053741	N/A
EP 619079A3	April 8, 1994	1994EP-0105487	N/A
CN 1099934A	April 8, 1994	1994CN-0105285	N/A
US 5753223A	April 8, 1994	1994US-0224861	Cont of
US 5753223A	March 6, 1996	1996US-0611507	N/A
EP 619079B1	April 8, 1994	1994EP-0105487	N/A

INT-CL (IPC): A23K 1/16; A23K 1/165; A23K 1/18; A61K 38/54

ABSTRACTED-PUB-NO: EP 619079A  
BASIC-ABSTRACT:

Granulated feed additive for ruminants comprises a core contg. an active substance and a coating comprising (A) a substance selected from hardened vegetable fats and oils, hardened animal fats and oils, fatty acid esters and phospholipids and (B) a substance selected from (i) an enzyme capable of hydrolysing the substance (A) and (ii) an activator capable of activating an enzyme secreted from a post-abomasum digestive organ of the ruminant capable of hydrolysing the substance (A) The outer portion of the coating layer is free of substance (B).

Pref. enzymes (B) (i) are lipase, phospholipase or esterase. Activators (B) (ii) are bile powder or pancreatin. These are pref. in the form of a powder with a particle diameter less than 100 microns. The active ingredient may be amino acids, proteins, carbohydrates, fats, vitamins and drugs.

ADVANTAGE - The novel compsn. is stable in the rumen and allows release of the biologically active substance in the post-abomasum. This presents the degradation of the active by microorganisms in the rumen. The absence of enzyme or activator in the outer layer enhances the protection of the active ingredient.  
ABSTRACTED-PUB-NO:

EP 619079B  
EQUIVALENT-ABSTRACTS:

Granulated feed additive for ruminants comprises a core contg. an active substance and a coating comprising (A) a substance selected from hardened vegetable fats and oils, hardened animal fats and oils, fatty acid esters and phospholipids and (B) a substance selected from (i) an enzyme capable of hydrolysing the substance (A) and (ii) an activator capable of activating an enzyme secreted from a post-abomasum digestive organ of the ruminant capable of hydrolysing the substance (A) The outer portion of the coating layer is free of substance (B).

Pref. enzymes (B) (i) are lipase, phospholipase or esterase. Activators (B) (ii) are bile powder or pancreatin. These are pref. in the form of a powder with a particle diameter less than 100 microns. The active ingredient may be amino acids, proteins, carbohydrates, fats, vitamins and drugs.

ADVANTAGE - The novel compsn. is stable in the rumen and allows release of the biologically active substance in the post-abomasum. This presents the degradation of the active by microorganisms in the rumen. The absence of enzyme or activator in the outer layer enhances the protection of the active ingredient.

US 5753223A

Granulated feed additive for ruminants comprises a core contg. an active substance and a coating comprising (A) a substance selected from hardened vegetable fats and oils, hardened animal fats and oils, fatty acid esters and phospholipids and (B) a substance selected from (i) an enzyme capable of hydrolysing the substance (A) and (ii) an activator capable of activating an enzyme secreted from a post-abomasum digestive organ of the ruminant capable of hydrolysing the substance (A) The outer portion of the coating layer is free of substance (B).

Pref. enzymes (B) (i) are lipase, phospholipase or esterase. Activators (B) (ii) are bile powder or pancreatin. These are pref. in the form of a powder with a particle diameter less than 100 microns. The active ingredient may be amino acids, proteins, carbohydrates, fats, vitamins and drugs.

ADVANTAGE - The novel compsn. is stable in the rumen and allows release of the biologically active substance in the post-abomasum. This presents the degradation of the active by microorganisms in the rumen. The absence of enzyme or activator in the outer layer enhances the protection of the active ingredient.

CHOSEN-DRAWING: Dwg.0/0



TITLE-TERMS: GRANULE RUMINANT FEED ADDITIVE POST ABOMASUM RELEASE COMPRISE CORE  
CONTAIN ACTIVE SUBSTANCE COATING COMPRISE HARDEN FAT OIL HYDROLYSIS ENZYME

DERWENT-CLASS: B07 C07 D13

CPI-CODES: B04-B01B; B14-S12; B03-L; C03-L; B04-B01C; C04-B01C; B04-B01C1;  
C04-B01C1; B04-B01C2; C04-B01C2; B04-L01; C04-L01; B04-L05A; C04-L05A; B04-N04;  
C04-N04; B05-B01P; C05-B01P; B10-B01B; C10-B01B; B10-B02; C10-B02; B12-M10;  
C12-M10; B14-E10; C14-E10; B14-E11; C14-E11; C04-B01B; C14-S12; D03-C; D03-G01;  
D03-G02; D03-G04;

CHEMICAL-CODES:

Chemical Indexing M1 \*01\*

Fragmentation Code

M423 M430 M782 M903 Q220 R032 R051 V300 V643 V735  
V752 V772 V802 V813 V815

Chemical Indexing M2 \*02\*

Fragmentation Code

H1 H101 H182 J0 J011 J1 J171 M280 M315 M321  
M332 M343 M349 M381 M391 M416 M430 M620 M630 M782  
M903 M904 M910 Q220 R032 R051

Specific Compounds

03827M

Registry Numbers

1655U

Chemical Indexing M2 \*03\*

Fragmentation Code

H5 H521 H8 J0 J011 J1 J171 M280 M311 M321  
M342 M381 M391 M423 M430 M630 M782 M903 M904 M910  
Q220 R032 R051 V0 V713

Specific Compounds

07352M

Registry Numbers

1835U

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1655U; 1835U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1994-141572

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File: DWPI

Aug 24, 1992

DERWENT-ACC-NO: 1992-327629

DERWENT-WEEK: 199240

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TITLE: Prodn. of dust-free powdered enzyme for foodstuffs, etc. - is by adding dust-preventing substance e.g. surfactant oil or fat, and dextrin, maltose or lactose, to powder

PATENT-ASSIGNEE:

ASSIGNEE

CODE

SHIN NIHON KAGAKU KOGYO KK

NIPC

PRIORITY-DATA: 1990JP-0412033 (December 18, 1990)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 04234985 A	August 24, 1992	N/A	008	C12N009/98

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP04234985A	December 18, 1990	1990JP-0412033	N/A

INT-CL (IPC): C12N 9/98

ABSTRACTED-PUB-NO: JP04234985A

BASIC-ABSTRACT:

Method adding a dust-preventing substance to a raw powder enzyme which tends to form dust. The dust-preventing substance is pref. a combination of a surface active agent and an oil or a fat with at least one excipient such as dextrin, maltose and lactose.

USE/ADVANTAGE - The non-dust powder enzyme can be used in foodstuff mfr. as a feed additive and in pharmaceuticals.

In an example of raw cylanase powder is mixed with 30ml of 95% ethanol contg. 2g of each additive and dried at 30 deg. C for 18 hrs. under a vacuum of 10 (-1) mmHg to prepare powder enzyme. The compsn. contg. a glycerol fatty acid ester castor oil or PEG400 can be dissolved in 95% ethanol. Sorbitan fatty acid esters, propylene glycol fatty acid esters, soya lecithin and egg lecithin show good dispersion. the activity yield after vacuum dried is 98-100% and the dust-preventing efficiency is evident. Soyabean oil shows sepn. a mixt. of soya lecithin with it shows good dissolutio

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: PRODUCE DUST FREE POWDER ENZYME FOOD ADD DUST PREVENT SUBSTANCE SURFACTANT OIL FAT DEXTRIN MALTOSE LACTOSE POWDER

ADDL-INDEXING-TERMS:  
PHARMACEUTICALS

DERWENT-CLASS: B04 D13 D16

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L12: Entry 4 of 125

File: USPT

May 2, 2000

US-PAT-NO: 6056822

DOCUMENT-IDENTIFIER: US 6056822 A

TITLE: Process and system for coating a feed composition with a feed additive

DATE-ISSUED: May 2, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Jefferson; Wayne A.	Simpsonville	SC	N/A	N/A
Kapp; Alan M.	Greer	SC	N/A	N/A

US-CL-CURRENT: 118/683; 118/19, 118/23, 118/24, 118/320, 118/612, 239/302,  
239/306, 239/310, 366/177.1, 99/516, 99/534

## ABSTRACT:

The present invention is generally directed to various systems and processes for applying feed additives to a solid feed composition. In one embodiment, a solid feed additive is combined with a liquid carrier to form a feed additive suspension. The feed additive suspension is fed to a dispensing device that sprays the suspension onto a solid feed composition stream. In an alternative embodiment, a system is disclosed that combines and/or dilutes various liquid feed additives that are then similarly sprayed on a solid feed composition stream. In various embodiments of the present invention, the system includes a plurality of submixing systems that not only maintain a homogeneous suspension or solution but are also capable of continuously applying the solution or suspension to the feed composition.

35 Claims, 15 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 11

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L12: Entry 4 of 125

File: USPT

May 2, 2000

DOCUMENT-IDENTIFIER: US 6056822 A

TITLE: Process and system for coating a feed composition with a feed additive

## DEPR:

In one particular embodiment, the systems illustrated in FIGS. 1, 7 and 8 are particularly well suited to combining an enzyme powder made from eggs with an organic liquid (fat or oil), such as soybean oil or animal fat. The egg powder enzyme can be added to a feed composition in order to aid digestion of the animal ingesting the feed. Since egg powder enzymes degrade when exposed to water, the liquid carrier, in this embodiment, should be an organic liquid (fat or oil). The egg powder enzyme can be added to the oil in an amount of about 5% to about 30% by weight, and particularly in an amount of about 10% by weight.

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L12: Entry 27 of 125

File: USPT

Jul 5, 1988

DOCUMENT-IDENTIFIER: US 4755397 A

TITLE: Starch based particulate encapsulation process

## BSPR:

A wide range of materials may be encapsulated using the process disclosed herein. The only limitations with respect to the core material to be encapsulated are that it be insoluble in the salt solution at the exit temperature from the reactor; that it have a boiling point greater than the exit temperature; and that it not react with water or the salt under the processing conditions. Representative materials include flavors and seasonings including flavoring oils; pigments; metallic powders; latices; oils; plasticizers; herbicides; insecticides; fungicides; nematocides; bacteriocides; rodenticides; molluscicides; acaricides; larvacides; fumigants; animal repellants; insect repellants; plant growth regulators; fertilizers; pheromones; odor producing compositions; enzymes; drugs, vitamins; fabric softeners; temperature indicators; catalysts; adhesives; pressure sensitive color formers; electrostatographic toners; pressure rupturable lubricants; antifoulants; phase change materials; fire extinguishers; corrosion inhibitors; defoamers; sizing agents; thickeners; unsaturated fats and acidulants. Depending upon the type of core material employed, from as little as 0.1% to as much as 80% by weight core material (solids based on starch plus salt plus core material) may be encapsulated in the starch matrix.

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File: JPAB

Apr 18, 2000  
late

PUB-NO: JP02000106873A

DOCUMENT-IDENTIFIER: JP 2000106873 A

TITLE: THERMALLY STABLE ENZYME AND PRODUCTION THEREOF

PUBN-DATE: April 18, 2000

## INVENTOR-INFORMATION:

NAME

MINOSHIMA, RYOICHI

ENDO, YORIKO

COUNTRY

N/A

N/A

## ASSIGNEE-INFORMATION:

NAME

NISSHIN OIL MILLS LTD:THE

COUNTRY

N/A

APPL-NO: JP10284211

APPL-DATE: October 6, 1998

INT-CL (IPC): C12N 9/96

## ABSTRACT:

PROBLEM TO BE SOLVED: To obtain a thermally stable enzyme capable of performing an enzyme reaction at a high temperature stably by improving the thermal stability of the enzyme in a solution, and also provide a method for producing a stable enzyme powder hardly inducing the reduction of the enzyme activity even in a powder formation by a heat-drying method.

SOLUTION: This thermally stable enzyme contains 0.01-200 wt.% phospholipid and also 0.01-100 wt.% fat soluble vitamin based on the weight of the enzyme, and it is preferable that the enzyme is a lipolytic enzyme, and the fat soluble vitamin is tocopherol, tocotrienol, retinol, calciferol, phylloquinone or ubiquinone. The method for producing an enzyme is to obtain an enzyme powder by drying an enzyme solution containing the phospholipid and the fat soluble vitamin, and the method of drying is preferably a spray drying method.

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L12: Entry 45 of 125

File: JPAB

Mar 28, 2000

PUB-NO: JP02000083573A  
DOCUMENT-IDENTIFIER: JP 2000083573 A  
TITLE: FROZEN BREAD DOUGH IMPROVER

PUBN-DATE: March 28, 2000

## INVENTOR-INFORMATION:

NAME

OI, AKIO

WAZAWA, YASUYUKI

KOBAYASHI, MAKOTO

COUNTRY

N/A

N/A

N/A

## ASSIGNEE-INFORMATION:

NAME

FUJI OIL CO LTD

COUNTRY

N/A

APPL-NO: JP10253157

APPL-DATE: September 8, 1998

INT-CL (IPC): A21D 8/04; A21D 2/16; A21D 2/22; A21D 2/26; A21D 10/02

## ABSTRACT:

PROBLEM TO BE SOLVED: To obtain a frozen bread dough improver capable of improving the spreadability and mechanical durability of dough and of preventing bread from freeze damage such as bread deterioration by incorporating a fat-and-oil with each specified amount of hemicellulase enzyme and amylase enzyme but no synthetic emulsifier/yeast food.

SOLUTION: This improver, which is a fat-and-oil composition, is obtained by incorporating 100 pts.wt. of a kind of fat-and-oil such as rapeseed oil with pref. 0.05-0.5 pt.wt. of hemicellulase enzyme and a total of 0.3-1.0 wt.%, calculated as powder, of amylase enzyme derived from *Aspergillus oryzae*, and pref. furthermore, 0.6-1.2 pts.wt. of ascorbic acid but no synthetic emulsifier/yeast food; wherein it is preferable that amylase is included at 0.2-0.75 pt.wt. based on 100 pts.wt. of the fat-and-oil. Specifically, this improver is produced by dispersing hemicellulase enzyme powder, amylase enzyme powder and ascorbic acid in a liquid fat-and-oil followed by incorporating the resultant dispersion with a plastic fat-and-oil.

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L12: Entry 89 of 125

File: DWPI

Jun 30, 1998

DERWENT-ACC-NO: 1998-422263

DERWENT-WEEK: 199836

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TITLE: Enzyme cosmetics for application on skin - contain malt powder with protein, fat and cellulose degrading enzymes, which is compounded with freeze dried natto powder

## PATENT-ASSIGNEE:

ASSIGNEE

CODE

SHIGA H

SHIGI

PRIORITY-DATA: 1996JP-0359576 (December 17, 1996)

## PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

JP 10175815 A

June 30, 1998

N/A

002

A61K007/00

## APPLICATION-DATA:

PUB-NO

APPL-DATE

APPL-NO

DESCRIPTOR

JP10175815A

December 17, 1996

1996JP-0359576

N/A

INT-CL (IPC): A61K 7/00; A61K 7/48

ABSTRACTED-PUB-NO: JP10175815A

## BASIC-ABSTRACT:

Enzyme cosmetics for application on skin contain freeze dried natto powder mixed with malt powder containing a protein, a fat and cellulose degrading enzymes. The composition dissolves skin lipid and keratin peeling material.

ADVANTAGE - The cosmetics are safe and stable on skin.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: ENZYME COSMETIC APPLY SKIN CONTAIN MALT POWDER PROTEIN FAT CELLULOSE DEGRADE ENZYME COMPOUND FREEZE DRY NATTO POWDER

DERWENT-CLASS: D16 D21

CPI-CODES: D05-A02; D08-B;

## SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1998-126918



# WEST



Generate Collection

L12: Entry 37 of 125

File: USPT

Jun 21, 1983

DOCUMENT-IDENTIFIER: US 4389330 A  
TITLE: Microencapsulation process

## BSPPR:

The microcapsule product of the present invention is usually made up of particles of a spherical shape although sometimes the microcapsules may be irregularly shaped. The microcapsules can vary in size, ranging from submicron to millimeter diameters. Preferably, submicron to 250- $\mu$ m diameters are desirable for pharmaceutical formulations allowing administration of the microcapsules with a standard syringe and needle. The microcapsules find utility in a wide variety of applications depending upon the type of deliverable substance incorporated therein. The present microcapsules are especially useful in the administration of a variety of biologically active agents to human and animal subjects. For instance, the present microcapsules when containing a contraceptive agent can be administered to a subject by injection or by transcervical migration and transport to the internal female reproductive organs for birth control. Suitable contraceptive agents include estrogens such as diethyl stilbestrol, 17-beta-estradiol, estrone, ethinyl estradiol, mestranol, and the like; progestins such as norethindrone, norgestryl, ethynodiol diacetate, lynestrenol, medroxyprogesterone acetate, dimethisterone, megestrol acetate, chlormadinone acetate, norgestimate, norethisterone, ethisterone, melengestrol, norethynodrel and the like; and spermicidal compounds such as nonylphenoxypolyoxyethylene glycol, benzethonium chloride, chlorindanol and the like. Other biologically active agents which can be incorporated in the present microcapsules include gastrointestinal therapeutic agents such as aluminum hydroxide, calcium carbonate, magnesium carbonate, sodium carbonate and the like; non-steroidal antifertility agents; parasympathomimetic agents; psychotherapeutic agents; major tranquilizers such as chlorpromazine HCl, clozapine, mesoridazine, metiapine, reserpine, thioridazine and the like; minor tranquilizers such as chlordiazepoxide, diazepam, meprobamate, temazepam and the like; rhinological decongestants; sedative-hypnotics such as codeine, phenobarbital, sodium pentobarbital, sodium secobarbital and the like; other steroids such as testosterone and testosterone propionate; sulfonamides; sympathomimetic agents; vaccines; vitamins and nutrients such as the essential amino acids, essential fats and the like; antimalarials such as 4-aminoquinolines, 8-aminoquinolines, pyrimethamine and the like; anti-migraine agents such as mazindol, phentermine and the like; anti-Parkinson agents such as L-dopa; anti-spasmodics such as atropine, methscopolamine bromide and the like; antispasmodics and anticholinergic agents such as bile therapy, digestants, enzymes and the like; antitussives such as dextromethorphan, noscapine and the like; bronchodilators; cardiovascular agents such as anti-hypertensive compounds, Rauwolfia alkaloids, coronary vasodilators, nitroglycerin, organic nitrates, pentaerythritotetranitrate and the like; electrolyte replacements such as potassium chloride; ergotalkaloids such as ergotamine with and without caffeine, hydrogenated ergot alkaloids, dihydroergocristine methanesulfate, dihydroergocornine methanesulfonate, dihydroergokryptine methanesulfate and combinations thereof; alkaloids such as atropine sulfate, Belladonna, hyoscyne hydrobromide and the like; analgetics; narcotics such as codeine, dihydrocodienone, meperidine, morphine and the like; non-narcotics such as salicylates, aspirin, acetaminophen, d-propoxyphene and the like; antibiotics such as the cephalosporins, chloramphenicol, gentamicin, Kanamycin A, Kanamycin B, the penicillins, ampicillin, streptomycin A, antimycin A, chloropamtheniol, metromidazole, oxytetracycline penicillin G, the tetracyclines, and the like; anti-cancer agents; anti-convulsants such as mephenytoin, phenobarbital, trimethadione; anti-emetics such as thiethylperazine; antihistamines such as chlorophenazine, dimenhydrinate, diphenhydramine, perphenazine, tripeleminamine

and the like; anti-inflammatory agents such as hormonal agents, hydrocortisone, prednisolone, prednisone, non-hormonal agents, allopurinol, aspirin, indomethacin, phenylbutazone and the like; prostaglandins; cytotoxic drugs such as thiotepa, chlorambucil, cyclophosphamide, melphalan, nitrogen mustard, methotrexate and the like; antigens of such microorganisms as *Neisseria gonorrhoea*, *Mycobacterium tuberculosis*, Herpes virus (humoris, types 1 and 2), *Candida albicans*, *Candida tropicalis*, *Trichomonas vaginalis*, *Haemophilus vaginalis*, Group B streptococcus *ecoli*, *Microplasma hominis*, *Hemophilus ducreyi*, Granuloma inguinale, *Lymphopathia venereum*, *Treponema pallidum*, *Brucella abortus*, *Brucella melitensis*, *Brucella suis*, *Brucella canis*, *Campylobacter fetus*, *Campylobacter fetus intestinalis*, *Leptospira pomona*, *Listeria monocytogenes*, *Brucella ovis*, Equine herpes virus 1, Equine arteritis virus, IBR-IBP virus, BVD-MB virus, *Chlamydia psittaci*, *Trichomonas foetus*, *Toxoplasma gondii*, *Escherichia coli*, *Actinobacillus equuli*, *Salmonella abortus ovis*, *Salmonella abortus equi*, *Pseudomonas aeruginosa*, *Corynebacterium equi*, *Corynebacterium pyogenes*, *Actinobacillus seminis*, *Mycoplasma bovis genitalium*, *Aspergillus fumigatus*, *Absidia ramosa*, *Trypanosoma equiperdum*, *Babesia caballi*, *Clostridium tetani*, and the like; antibodies which counteract the above microorganisms; and enzymes such as ribonuclease, neuraminidase, trypsin, glycogen phosphorylase, sperm lactic dehydrogenase, sperm hyaluronidase, adenosinetriphosphatase, alkaline phosphatase, alkaline phosphatase esterase, amino peptidase, trypsin chymotrypsin, amylase, muramidase, acrosomal proteinase, diesterase, glutamic acid dehydrogenase, succinic acid dehydrogenase, beta-glycophosphatase, lipase, ATP-ase alpha-peptate gamma-glutamylotranspeptidase, sterol-3-beta-ol-dehydrogenase, DPN-di-aprorase.

**WEST**☐ Generate Collection

L12: Entry 81 of 125

File: DWPI

Feb 22, 2001

DERWENT-ACC-NO: 2001-202808

DERWENT-WEEK: 200120

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TITLE: A storage stable liquid bread improving composition comprising a vegetable triglyceride oil, fat and/or emulsifier, granulated enzyme particles, and other bread improving ingredients

INVENTOR: MULDER, H M; NOBEL, L ; SCHOONEVELD-BERGMANS, M E F ; SCHUTTE, E J

PATENT-ASSIGNEE:

ASSIGNEE

CODE

DSM NV

STAM

PRIORITY-DATA: 1999EP-0202672 (August 17, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 200111974 A1	February 22, 2001	E	011	A21D008/04

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 200111974A1	August 17, 2000	2000WO-EP08146	N/A

INT-CL (IPC): A21D 2/16; A21D 8/04; A21D 10/04

ABSTRACTED-PUB-NO: WO 200111974A

BASIC-ABSTRACT:

NOVELTY - A storage-stable liquid bread improving composition comprising enzyme particles of a larger size than in prior art processes, without using a complex mixture or sophisticated production procedure.

DETAILED DESCRIPTION - A liquid bread improving composition, comprises (a) 30-70wt% vegetable triglyceride oil, (b) 2.5-15wt% fat and/or emulsifier, (c) 0.05-5wt% enzyme particles where 70% or them have a size more than 50 microns, and (d) 5-50wt% other bread improving ingredients. INDEPENDENT CLAIMS are also included for making a dough, by mixing flour, yeast, water, optionally salt, and the bread improving composition. Also, the production of bread by baking the dough prepared.

USE - The composition is useful for adding to dough in the production of various types of bread (e.g. white bread, wholemeal, etc.)

ADVANTAGE - The composition is easy to produce and storage stable without separating into two distinct phases, and can be automatically dosed to basic dough

*Interference?*

ingredients for bread production

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: STORAGE STABILISED LIQUID BREAD IMPROVE COMPOSITION COMPRISE  
VEGETABLE OIL FAT EMULSION GRANULE ENZYME PARTICLE BREAD IMPROVE INGREDIENT

DERWENT-CLASS: D11

CPI-CODES: D01-B01; D01-B02A; D03-H01N; D03-H02E;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2001-060232

**WEST**

Generate Collection

L12: Entry 83 of 125

File: DWPI

Jun 14, 2000

DERWENT-ACC-NO: 2000-534268

DERWENT-WEEK: 200049

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TITLE: Granular baking improver product for use in dough is prepared using a liquid malt extract and a liquid emulsifier

INVENTOR: BERG, U; GERMEROTH, H ; HAEFLIGER, H ; KEHRLI, P ; SCHUSTER, V

PATENT-ASSIGNEE:

ASSIGNEE

SOC PROD NESTLE SA

CODE

NEST

PRIORITY-DATA: 1998EP-0204169 (December 10, 1998)

PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

EP 1008309 A1

June 14, 2000

E

009

A23P001/02

DESIGNATED-STATES: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

APPLICATION-DATA:

PUB-NO

APPL-DATE

APPL-NO

DESCRIPTOR

EP 1008309A1

December 10, 1998

1998EP-0204169

N/A

INT-CL (IPC): A21D 6/00; A21D 10/00; A23P 1/02

ABSTRACTED-PUB-NO: EP 1008309A

BASIC-ABSTRACT:

NOVELTY - A granular baking improver product, which has a mean particle diameter from 300-500 micro m, less than 1% by volume of particles of diameter less than 50 micro m, comprises (wt.%) malt extract and/or high melting fat (8-20) emulsifier (8-20), stabilizer (15-25), filler (45-69), enzyme mix (up to 4), acid (up to 0.5) and oxidizing agent (up to 0.5). The improver has a moisture content of 4-6%.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the production process of the above baking improver.

USE - The granular baking improver products are used in dough preparation.

ADVANTAGE - The product is non dusting and free flowing. It offers resistance to compaction and is easily broken after compaction. The use of liquid malt and liquid emulsifiers leads to improvements in cost and properties.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: GRANULE BAKE IMPROVE PRODUCT DOUGH PREPARATION LIQUID MALT EXTRACT LIQUID EMULSION

DERWENT-CLASS: D11 D16

*Interference?*

CPI-CODES: D01-B01;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2000-159424

**WEST**

Generate Collection

L12: Entry 59 of 125

File: JPAB

Feb 12, 1988

PUB-NO: JP363032485A  
DOCUMENT-IDENTIFIER: JP 63032485 A  
TITLE: PRODUCTION OF STABLE ENZYME GRANULE

PUBN-DATE: February 12, 1988

## INVENTOR-INFORMATION:

NAME

KIMATA, ROKUJI

MURASE, HIROKI

COUNTRY

*New 102?*

## ASSIGNEE-INFORMATION:

NAME

AMANO PHARMACEUT CO LTD

COUNTRY

N/A

APPL-NO: JP61176312  
APPL-DATE: July 25, 1986

INT-CL (IPC): C12N 9/96

## ABSTRACT:

PURPOSE: To stably obtain enzyme granules having uniform particle size with shortened production step in high yield, by coating a molten low-melting substance and an enzyme using a salt and/or a sugar as a nucleus and adding a high-melting substance to the coated product.

CONSTITUTION: Nuclei having uniform particle size (e.g. sodium chloride crystal, refined sugar, etc.) is added with a molten substance having low melting point (i.e. 20~80°C) such as oil and fat, wax, polymer, surfactant, plasticizer, alcohol ester (polyethylene glycol, polyoxyethylene sorbitan fatty acid, polyoxyfatty acid ester, etc.) and granulated by general granulator of e.g. mixing-type, stirring-type, fluidized rolling-type, etc. Simultaneous to or after the addition of the low-melting substance, an enzyme such as protease, lipase, amylase, cellulase, etc., and/or an excipient of said enzyme are added at an amount of <60 wt% of the low-melting substance. The mixture is further added with fine powder of a high-melting substance having particle diameter of 10~100µ; and granulated to obtain stable granule of enzyme.

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*low m.w. final product?*

**WEST****End of Result Set****Generate Collection**

L16: Entry 1 of 1

File: DWPI

Feb 12, 1988

DERWENT-ACC-NO: 1988-080330

DERWENT-WEEK: 198812

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TITLE: Stable enzyme granules prepn. - by coating enzyme with low m.pt. molten material then adding high m.pt. substance

PATENT-ASSIGNEE:

ASSIGNEE

CODE

AMANO PHARM KK

AMAN

PRIORITY-DATA: 1986JP-0176312 (July 25, 1986)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 63032485 A	February 12, 1988	N/A	005	N/A
JP 91064108 B	October 3, 1991	N/A	000	N/A

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP63032485A	July 25, 1986	<u>1986JP-0176312</u>	N/A
JP91064108B	July 25, 1986	<u>1986JP-0176312</u>	N/A

INT-CL (IPC): C11D 3/38; C12N 9/96

ABSTRACTED-PUB-NO: JP63032485A

BASIC-ABSTRACT:

Process comprises coating enzyme (esp. protease, lipase, amylase, cellulase) with molten substances having low melting temp. (pref. 80 deg.C or lower esp. oil, polymer, surfactant, etc.) using salts and/or saccharides as nucleus, then adding substances having high melting temp. (pref. 50 deg.C or higher, esp. oil, polymer, surfactant, etc.).

ADVANTAGE - The process maintains activity of enzyme in the granulation process.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: STABILISED ENZYME GRANULE PREPARATION COATING ENZYME LOW MOLTEN MATERIAL ADD HIGH SUBSTANCE

DERWENT-CLASS: D16

CPI-CODES: D05-A02C;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1988-036010